

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions of claims in the application:

Listing of Claims:

1. (Currently amended) A method for transmitting data in a communication system wherein the data is transmitted in a communication frame, the communication frame comprising a set of time slots, the method comprising:

receiving one or more scattering instructions from a gateway;

dividing data corresponding to a time slot in the set of time slots into a plurality of intervals in accordance with the one or more scattering instructions, wherein each interval in the plurality of intervals comprises a duration which is shorter than a duration of the time slot;

scattering at least a portion of the plurality of intervals to one or more disparate time slots in the set of time slots based upon the one or more scattering instructions, wherein the portion of the plurality of intervals are scattered non-contiguously; and

transmitting the data in accordance with locations of the plurality of intervals within the communication frame.

2. (Previously presented) The method of claim 1, further comprising receiving configuration information, wherein the one or more scattering instructions are included with the configuration information.

3. (Previously presented) The method of claim 1, wherein the one or more scattering instructions comprise an index into a memory of stored time-scattering control information.

4. (Previously presented) The method of claim 3, wherein the memory is disposed within a terminal device.

5. (Previously presented) The method of claim 1, wherein the one or more scattering instructions comprise a table of information that indicates a temporal scattering of the data.

6. (Previously presented) The method of claim 5, wherein the table of information specifies, by a time interval identifier, a starting location for scattered data.
7. (Previously presented) The method of claim 1, wherein the one or more scattering instructions comprise an algorithm for temporally scattering the data.
8. (Previously presented) A terminal device transmitting data in a communication system, comprising:
 - a receiver configured to receive one or more scattering instructions from a gateway device;
 - a processor configured to:
 - divide data associated with a time slot of a communication frame into a plurality of intervals in accordance with the one or more scattering instructions, wherein each interval comprises a shorter duration than the time slot;
 - distribute the plurality of intervals among one or more disparate time slots in the communication frame based at least in part on the one or more scattering instructions, wherein the plurality of intervals are distributed non-contiguously; and
 - a transmitter configured to transmit the plurality of intervals in accordance with locations of the plurality of intervals within the communication frames.
9. (Previously presented) The terminal device of claim 8, wherein the receiver is further configured to receive configuration information, wherein the one or more scattering instructions are included with the configuration information.
10. (Previously presented) The terminal device of claim 8, wherein the one or more scattering instructions comprise an index into a memory.
11. (Previously presented) The terminal device of claim 10, wherein the memory stores time scattering control information.
12. (Cancelled)

13. (Previously presented) The terminal device of claim 8, wherein the one or more scattering instructions comprise a table of information that indicates a temporal scattering of the data.
14. (Previously presented) The terminal device of claim 8, wherein the one or more scattering instructions comprise an algorithmic indication of how to scatter the intervals.
15. (Previously presented) A method, comprising:
receiving a request from a terminal device for access to a communications channel;
generating a schedule of transmission for the terminal device, wherein the schedule of transmission specifies a division of data into a plurality of time intervals, each time interval shorter in duration than a time slot of a communication frame, the schedule of transmission further specifies a location of each time interval from the plurality of time intervals within the communication frame, wherein the plurality of time intervals are located within the communication frame in a non-contiguous manner;
generating one or more scattering instructions in accordance with the schedule of transmission; and
transmitting the one or more scattering instructions to the terminal device.
16. (Previously presented) The method of claim 15, wherein receiving the request comprises receiving an indication of the amount of data queued at the terminal device for communication.
17. (Previously presented) The method of claim 15, wherein the schedule of transmission comprises a list of the plurality of time intervals.
18. (Previously presented) The method of claim 17, wherein each time interval comprises a starting location in the communication frame and a transmission duration.
19. (Previously presented) The method of claim 15, further comprising transmitting modulation control information for time scattered data.
20. (Previously presented) The method of claim 18, wherein the communication frame is divided into a number of time intervals in accordance with a dividing rate.

21. (Previously presented) The method of claim 18, wherein the starting location comprises a time slot and the transmission duration comprises a number of time intervals.

22. (Previously presented) The method of claim 18, wherein the starting location comprises a first time interval identifier and the transmission duration comprises a second time interval identifier.

23. (Previously presented) The method of claim 15, further comprising:
receiving data from the terminal device, transmitted in a scattered manner per the one or more scattering instructions; and
reordering the data in accordance with the schedule of transmission to obtain the data in an originally intended order.

24-25. (Cancelled)

26. (Previously presented) An apparatus, comprising:
means for receiving a request from a terminal device for access to a communications channel and for wirelessly receiving scattering instructions;
means for generating a schedule of transmission for the terminal device, wherein the schedule of transmission specifies a partition of data into a plurality of time intervals, each time interval shorter in duration than a time slot of a communication frame, the schedule of transmission further specifies a location of each time interval from the plurality of time intervals within the communication frame, wherein the plurality of time intervals are located within the communication frame in a non-contiguous manner;
means for generating one or more scattering instructions in accordance with the schedule of transmission; and
means for transmitting the one or more scattering instructions to the terminal device.

27. (Previously presented) The apparatus of claim 26, wherein the means for receiving the request comprises means for receiving an indication of an amount of data queued at the terminal device for communication.

28. (Previously presented) The apparatus of claim 26, wherein the means for generating the schedule of transmission comprises means for generating a list of the plurality of time intervals.
29. (Previously presented) The apparatus of claim 28, wherein each time interval comprises a starting location in the communication frame and a transmission duration.
30. (Previously presented) The apparatus of claim 26, further comprising means for transmitting modulation control information for the time scattered data.
31. (Previously presented) The apparatus of claim 26, wherein the communication frame is divided into a number of time intervals in accordance with a dividing rate.
32. (Previously presented) The apparatus of claim 26, further comprising:
means for receiving data from the terminal device, the data transmitted in a scattered manner in accordance with the one or more scattering instructions; and
means for reordering the data in accordance with the schedule of transmission to obtain the data in an originally intended order.
- 33-34. (Cancelled)
35. (Currently amended) A terminal device for transmitting data in a communication system wherein the data is transmitted in a communication frame, the communication frame comprising a set of time slots, the terminal device comprising:
means for receiving one or more scattering instructions from a gateway;
means for partitioning data corresponding to a time slot in the set of time slots into a plurality of intervals in accordance with the one or more scattering instructions, wherein each interval in the plurality of intervals comprises a duration which is shorter than a duration of the time slot;
means for scattering at least a portion of the plurality of intervals to one or more disparate time slots in the set of time slots based upon the one or more scattering instructions, wherein the portion of the plurality of intervals are scattered non-contiguously; and

means for transmitting the data in accordance with locations of the plurality of intervals within the communication frame.

36. (Previously presented) The terminal device of claim 35, further comprising means for receiving configuration information, wherein the one or more scattering instructions are included with the configuration information.

37. (Previously presented) The terminal device of claim 35, further comprising a memory for storing time-scattering control information, wherein the one or more scattering instructions comprise an index into the memory.

38-42. (Cancelled)

43. (Currently amended) A ~~computer program product~~, comprising:
~~a computer-readable~~ machine-readable storage medium, comprising:

code for causing at least one computer to receive one or more scattering instructions from a gateway device;

code for causing the at least one computer to divide data associated with a time slot of a communication frame into a plurality of intervals in accordance with the one or more scattering instructions, wherein each interval comprises a shorter duration than the time slot;

code for causing the at least one computer to distribute the plurality of intervals among one or more disparate time slots in the communication frame based at least in part on the one or more scattering instructions, wherein the plurality of intervals are distributed non-contiguously; and

code for causing the at least one computer to transmit the plurality of intervals in accordance with locations of the plurality of intervals within the communication frames.

44. (Currently amended) The ~~computer program product~~ machine-readable storage medium of claim 43, ~~the computer-readable medium~~ further comprising code for causing the at least one computer to receive configuration information, wherein the configuration information includes the one or more scattering instructions.

45. (Currently amended) The ~~computer program product~~ machine-readable storage medium of claim 43, wherein the one or more scattering instructions include an index to a memory that stores time scattering control information.

46. (Currently amended) The ~~computer program product~~ machine-readable storage medium of claim 43, wherein the one or more scattering instructions include a table of information that indicates a temporal scattering of the data.

47. (Currently amended) The ~~computer program product~~ machine-readable storage medium of claim 43, wherein the one or more scattering specify an algorithm for temporally scattering the data.